

## REMARKS

Claims 1-4 and 10 have been canceled herein. Such cancellation is without prejudice on the merits to further prosecution of these claims in one or more continuing applications. Claims 5-9 remain in the case. Favorable reconsideration is respectfully requested.

### **Objection to the Drawings:**

This objection is respectfully traversed. The modeling of a musical passage comprising a series of tones and chord, as well as the pre-existing passage, is noted in the specification starting at page 12, line 8, and extending to page 13, line 7. In this passage, two very well known pre-existing passages, namely the songs "Silent Night" and "Amazing Grace" are referenced. These pre-existing passages are then modeled according to the present invention.

Specifically, at the bottom of page 12 of the specification is the following passage:

The famous German Christmas carol Silent Night can be used as an example. In this example, the structural foundation of the music form is the primary chord. The chord is modeled through the following numeric sequence:

1/1/5/1/4/1/4/1/5/1/1-5/1

Similarly, at the top of page 13 of the specification a similar model is presented for the pre-existing passage comprising the song "Amazing Grace."

With regard to the need to show in the drawings every feature of the claimed invention, Applicant respectfully notes that invention is essentially mathematical in nature. The modeling required by the present claims is a string of numbers; in effect then, the model is a mathematical formula. The specification may (and in this case does) contain the mathematical formulae that represent the modeled passage, such as the passage quoted above. See 37 CFR §1.58(a). Applicants therefore submit that the specification as filed adequately illustrates the invention as claimed.

Withdrawal of this objection is respectfully requested.

**Rejection of Claims 1-10 Under §102(b) Over Levine (*The Jazz Theory Book* © 1995):**

As applied to Claims 1-4 and 10, this rejection has been rendered moot by cancellation of the claims.

As applied to Claims 5-9, this rejection is respectfully traversed.

A critical limitation in the present claims is that the primary ionian tones are assigned sequential numeric designations that correspond to sequential musical intervals in an ionian scale (e.g., see claim 6). As more specifically recited in Claim 5, the ionian tones do, re, mi, fa, so, la, and ti are respectively designated 1, 2, 3, 4, 5, 6, and 7. Additionally, the numeric *tone* designations are also assigned a numeric *chord* designation. In the present invention, the tone designations and the chord designations **do not** shift or change as the musical passage is modeled. The designations are required by the language of the claims to be sequential and to represent correspondingly sequential musical intervals. This is in direct contrast to the convention method of representing western music, as exemplified by the Levine book.

Figure 2-17 of Levine demonstrates the difference between Levine's conventional approach, and the presently claimed invention. Levine's Figure 2-17 is a simple chord progression in the key of C (no sharps or flats in the key signature). However, note that the numerical frame of reference in Levine's modeled passage shifts as the chord designations change. That is, conventional music has a **constantly shifting** numerical frame of reference in which sequential musical intervals **are not** represented by sequential numeric designations. In Levine's first chord, the note "C" is designated as the 7th tone; in Levine's second chord the note "F" is designated as the 7th tone. Thus, in Levine's conventional approach, in the key of C, Levine assigns the number 7 to **two different notes**. This is not possible in the present approach. In the present invention, in the key of C, C will always be the 1 tone and F will always be the 4 tone. Moreover, those numbers represent the musical interval between the 1 and the 4 tones, regardless of the key.

In other words, the present claims positively require that each tone be given a **sequential** numeric designation, wherein that designation that "correspond[s] to **sequential** musical intervals" found in an ionian scale. In short, the numbers are assigned

sequentially and represent a fixed musical interval in the ionian mode, regardless of the root or chord name.

This is not the case in Levine's conventional system, as exemplified by Levine's Figure 2-17. The numerical designation "7th" applies both to the note "C" and the note "F" depending upon the musical frame of reference. That is, Levine's numbering scheme changes depending upon the alphabetic designation of the underlying chord. Levine's numbering shifts from chord to chord, a feature that is not possible in the present invention because each tone must have its own sequential designation. In contrast, Levine designates the first chord "D7 " Figure 2-17, and identifies the individual note "C" as the 7th tone. But Levine's frame of reference shifts in the next chord, which is designated "G7." Now, "C" is no longer the 7th tone, but "F" is.

This fact of conventional musical notation is extremely confusing to beginning students. The question from students inevitably pops up, again and again. "If C is 7 in the first chord, why isn't C also 7 in the second chord." For beginners (and pros too) a fixed system of sequential numeric designations, as in the present invention, conveys musical ideas far more easily and quickly than conventional chordal designations.

In the present invention, the seven Arabic numerals function as a point of reference to the physical location of the musical instrument where motion begins. For example, in the key of C, C is equal to 1. On a standard piano key board, this is the physical location of the white key to the left of the group of two black keys. The "2" position, then, is one piano key to the right of 1. The "2" position (and all other numeric values as used in the invention) are determined by their interval distance from 1. The "1" *tone* and the "1" *chord* remain the same throughout the entire composition, which is not the case in conventional musical notation (where the numerically designated tones change from chord to chord). Moreover, the interval distance between the selected tones of the music vocabulary is the same in every key. This is required in the claims: sequential numeric designations must be assigned to sequential musical intervals. The musical passage is then modeled using these designations. This is not the case with Levine, where the numerical designations of individual tones changes constantly, from chord to chord.

For these reasons, Applicant respectfully submits that the rejection of Claims 5-9 in view of Levine is untenable. Withdrawal of the same is respectfully requested.

**Rejection of Claims 1-4 and 10 Under §102(b) Over Aebersold (© 1979):**

This rejection has been rendered moot by cancellation of the claims. Such cancellation is without prejudice on the merits to further prosecution of these claims in one or more continuing applications.

**Rejection of Claims 1-4 and 10 Under §102(b) Over Coker et al. (*Patterns for Jazz*, 3rd Ed., © 1970):**

This rejection has been rendered moot by cancellation of the claims. Such cancellation is without prejudice on the merits to further prosecution of these claims in one or more continuing applications.

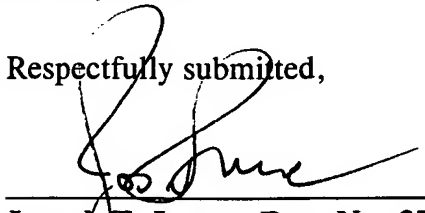
**Rejection of Claims 1-4 and 10 Under §102(b) Over Curtis (*First Steps to Ear Training*, © 1963):**

This rejection has been rendered moot by cancellation of the claims. Such cancellation is without prejudice on the merits to further prosecution of these claims in one or more continuing applications.

**CONCLUSION**

In light of the above amendment and accompanying remarks, Applicant submits that the application is now in condition for allowance. Early notification of such action is earnestly solicited.

Respectfully submitted,

  
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